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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,220	01/16/2002	Louis C. Barinaga	10006058-1	7438

7590 09/26/2003

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EXAMINER
PEAVEY, ENOCH E

ART UNIT	PAPER NUMBER
3676	

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	10/050,220	BARINAGA ET AL.	
	Examiner	Art Unit	
	Enoch E Peavey	3676	

-- The MAILING DATE of this communicati n appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *the Application filed 16 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *31-35* is/are allowed.

6)☐ Claim(s) *1,2,5-14,17-19,21-30,36 and 37* is/are rejected.

7)☒ Claim(s) *3,4,15,16 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5, 6, 7, 12-14, 17-19, 22, 23, 30, 36, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by McFarland, US No. 2,918,089. McFarland discloses an over-molded diaphragm pump (20) comprising a rigid substrate (54) having a chamber opening (defined by interior of 32) defined therein. There is an elastomeric diaphragm and sealing structure (22) fabricated of an elastomeric material (48, rubber). The diaphragm and sealing structure (22) are over-molded over at least a portion of the rigid substrate (54) and including at least one diaphragm portion (56c) extending over the chamber opening and defining a pump chamber (Fig. 1). There is a seal portion (78) for making a seal between the elastomeric diaphragm and sealing structure (22) and a mating part (36).

3. The diaphragm portion (48) is a dome-like structure (Fig. 2).

4. The seal portion (contacting portion of 22) has an over-molded gland seal (78) portion for mating with a raised boss of the mating part (36, FIG. 5).

5. The seal portion includes a circular gland (see cross-section of 78, Fig. 5).

6. There is a pump structure (40) for mechanically actuating the elastomeric diaphragm and sealing structure (22).

7. The raised boss (protruding portion of surface 36) protrudes from the chamber surface and circumscribes a periphery of the pump chamber (Fig. 5).

8. The pump body structure (20) includes a fluid inlet port (26) in fluid communication with the cavity, and a fluid outlet port (28) in fluid communication with the cavity (Fig. 1).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 8-11, 24-26, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barinaga et al., US No. 5,854,646 in view of McFarland. Barinaga discloses a diaphragm pump (FIG. 2) comprising a rigid substrate (44) having a chamber opening defined therein. There is an elastomeric diaphragm (46) and sealing structure fabricated of an elastomeric material(Col. 4, lines 54-56). There is a seal portion (planar portions of 46) for making a seal between the elastomeric diaphragm (36) and sealing structure and a mating part (34).

11. The pump actuator includes a motorized cam actuator (32).

12. The pump further comprises a bias spring (40) disposed within the chamber for biasing the elastomeric diaphragm (36) portion to a rest position. There is a plate member (surface contacting 36) disposed in the cavity between an end of the spring (40) and the elastomeric diaphragm (36).

13. The fluid sealed against is liquid ink used in an inkjet printer (Col. 3, lines 5-8).

14. There is an inlet valve permitting fluid flow in to the cavity from the fluid inlet port (24) and preventing fluid flow from the cavity into the fluid inlet port (24). There is an outlet valve permitting fluid flow from the cavity into the outlet port (26) and preventing flow from the outlet port (26) and into the cavity (FIG. 6b).

15. Wallace does not disclose the over-molded diaphragm pump as discusses above in paragraph 2. McFarland discloses such an arrangement in order to substantially preclude leakage through the assembly (Col. 1, lines 62-63).

16. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Wallace as taught by McFarland in order to substantially preclude leakage through the assembly.

Allowable Subject Matter

17. Claims 31-35 are allowed.

18. Claims 3, 4, 15, 16, 20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

19. The following is a statement of reasons for the indication of allowable subject matter: With regard to claims 31-33, the prior art of record does not disclose the over-molded diaphragm pump having a plurality of seal portions.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Enoch E Peavey whose telephone number is 305 1977. The examiner can normally be reached on Mon-Fri 8:00 am to 4:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (703) 308- 3179. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 1113.

Anthony Knight
Supervisory Patent Examiner
Group 3600

Enoch E Peavey
Art Unit 3676

September 21, 2003